

Claims

1. An electronic circuit comprising:
 - an electronic element;
 - a capacitor for accumulating a data signal in a form of an amount of charge; and
 - a first transistor whose conduction state is set in accordance with the amount of charge accumulated in the capacitor, the first transistor supplying an amount of current in accordance with the conduction state to the electronic element,

the capacitor being capable of accumulating a data current and a data voltage as the data signal.
2. The electronic circuit according to Claim 1,
 - the data current being a multi-value data current,
 - the data voltage being a binary data voltage, and
 - the multi-value data current and the binary data voltage being supplied to the capacitor via a second transistor.
3. The electronic circuit according to Claim 1,
 - a third transistor being provided between a gate and a drain of the first transistor.
4. The electronic circuit according to Claim 1,
 - further comprising a fourth transistor for determining a timing for starting or stopping supply of the current to

the electronic element after the conduction state of the first transistor is set according to the data signal.

5. An electronic circuit comprising:

an electronic element;

a capacitor that is capable of accumulating a data current and a data voltage as a data signal in a form of an amount of charge;

a first transistor whose conduction state is set in accordance with the amount of charge accumulated in the capacitor, the first transistor supplying an amount of current in accordance with the conduction state to the electronic element; and

a fifth transistor for resetting the amount of charge held in the capacitor to a predetermined state when the fifth transistor is turned on.

6. An electro-optical device including a plurality of scanning lines, a plurality of data lines, and a plurality of unit circuits, the electro-optical device comprising:

a data-voltage outputting circuit that outputs binary data voltages to the plurality of unit circuits via the plurality of data lines; and

a data-current outputting circuit that outputs data currents to the plurality of unit circuits via the plurality of data lines.

7. The electro-optical device according to Claim 6,

the data voltages and the data currents being supplied via each of the plurality of data lines.

8. An electro-optical device according to Claim 6,

the data voltages and the data currents being supplied via different data lines of the plurality of data lines, respectively.

9. An electro-optical device comprising:

a plurality of scanning lines;

a plurality of data lines crossing the plurality of scanning lines; and

a plurality of unit circuits provided with intersections of the plurality of scanning lines and the plurality of data lines, the plurality of unit circuits driving electro-optical elements in accordance with data signals supplied via the plurality of data lines,

digital data and analog data being generated as the data signal, and

three or more luminances being able to be set using the digital data.

10. The electro-optical device according to Claim 9,

the digital data being a voltage signal, and

the analog data being a current signal.

11. The electro-optical device according to Claim 9,

the digital data setting a luminance when the electro-optical device is in a low-power-consumption mode, and

the analog data setting a luminance when the electro-optical device is in a non-low-power-consumption mode.

12. The electro-optical device according to Claim 9,
a luminance level being any one of a first level and a second level when the digital data is supplied to the plurality of unit circuits, and

luminance being determined according to an accumulated length of any one of the first level and the second level within length of a predetermined period.

13. The electro-optical device according to Claim 6,
the electro-optical elements being EL elements.

14. The electro-optical device according to Claim 13,
each of the EL elements having a light-emitting layer that is composed of an organic material.

15. An electro-optical device comprising a display,
an image being able to be displayed using a plurality of different gray-scale methods.

16. A method of driving an electro-optical device including a plurality of scanning lines, a plurality of data lines, and a plurality of unit circuits each including an electro-optical element, the method, comprising:

generating a binary data voltage for allowing a digital gray scale method when the electro-optical device is in a low-power-consumption mode, and

generating a multi-value data current for allowing an

analog gray scale when the electro-optical device is in a non-low-power consumption mode.

17. A method of driving an electro-optical device including a plurality of scanning lines, a plurality of data lines, and a plurality of unit circuits each including an electro-optical element, the method, comprising:

outputting digital data for allowing a digital gray scale to the plurality of data lines when the electro-optical device is in a first display mode; and

outputting analog data for allowing an analog gray scale to the plurality of data lines when the electro-optical device is in a second display mode.

18. The method of driving an electro-optical device according to Claim 16,

the digital gray scale method allows setting of three or more luminances.

19. The method of driving an electro-optical device according to of Claim 16,

a luminance level in the digital gray scale method being any one of a first level or a second level,

luminance being determined according to an accumulated length of time in which the luminance level is at the first level or the second level within length of a predetermined period.

20. An electronic apparatus comprising an electro-optical

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device according to Claim 6.